SLIM Thermal Cycler

User Manual

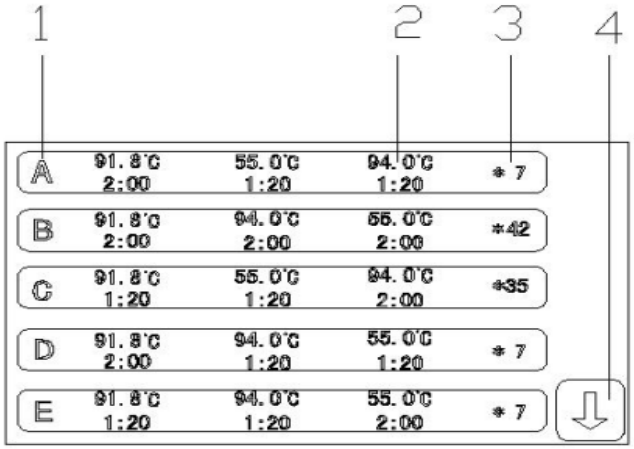

Fig. 1, MENU page screen

1 Program Number
2 Parameters
3 Cycle Numbers
4 Next Page

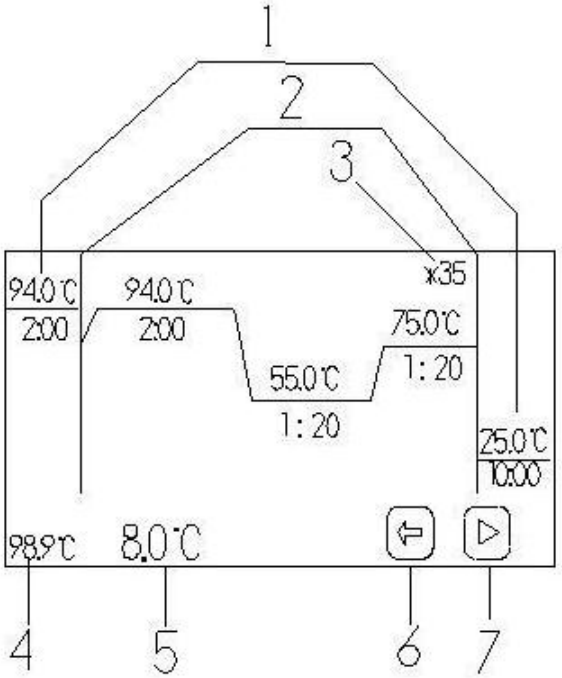

Fig. 2, PROGRAM page screen

1 Parameters
2 Cycle Bracket
3 Cycle Numbers
4 Lid Temperature
5 Block Temperature
6 BACK Key
7 START Key

To Start

Connect the unit to 12 V DC power adaptor and plug in the adaptor to the wall outlet. Upon connecting to 12 V DC, switch on the device and the unit enters into MENU page.

How to select a program

Up to 15 PCR programs can be stored. The programs are alphabetically listed from “A” to “O”. The first 5 programs (A thru E) are shown in the first MENU page screen. The next 5 programs are in the second MENU page. By tapping the "↓" key, one can toggle between these three pages(shown in Fig.1).

The thermal cycle parameters(temperature、the duration of each step (2 in Fig.1)、the number of cycles(3 in Fig.1)) are shown in the MENU page.

To select a program (to edit or to run), just tap the area of the screen where the parameters of the program are shown. Upon tapping, the PROG page appears.

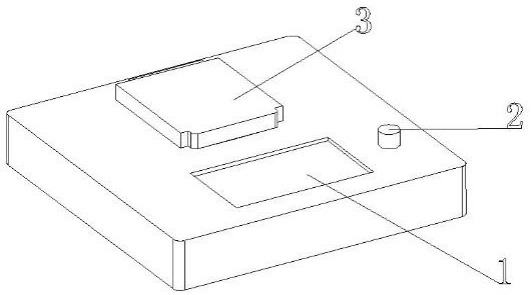

Fig. 3, Front View

1 Touch Screen
2 Rotary Knob
3 Hot Lid

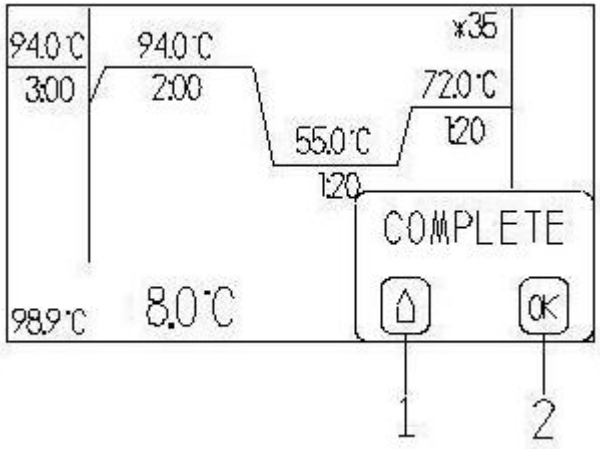

Fig. 4, PROGRAM page screen after completion

1 HOME Key
2 OK Key

Graphical Display

The thermal profile of a program is shown graphically in its PROG page. The parameters of each segment are shown on each side of the segment (1&2 in Fig.2). Only the segments within the bracket are to be cycled, and the number of cycles are shown on the upright corner of the bracket (3 in Fig.2).

The block temperature(5 in Fig.2) and the hot lid temperature (4 in Fig.2) are shown on the lower left. The hot lid can be turned on/off by tapping it to white/gray.

How to run a program

In the PROG page(see "Select a program"), tap the "START" key(7 in Fig.2) to start the thermal cycling program. The horizontal line flashes when the current segment is running. By tapping the "START" key (7 in Fig.2) on the screen, the thermal cycling program starts, and the program shows the “waiting” mode until the heated lid reaches 85ºC. The horizontal line flashes when the current segment is running.

After completion of a program, both of the "HOME" (1 in Fig.4) and “OK” keys (2 in Fig.4) appear on the screen. Tap “OK” key to terminate the run. Or tap "HOME" key to return to the MENU page without saving the changes of the parameters. Notice that the block automatically cools down to 4ºC until new program starts.

Pause and Stop a program

- Tap the “Ⅱ” key to pause the program. The block temperautre remains at the current temperature and the timer stops counting
- Tap the "START" key to resume the run.
- Tap the “■” key to stop the program, and to force quit a program and return to MENU page.

How to Edit a program

- To edit a program, enter into the PROG page (see "Select a program").
- In the PROG page, select the relative parameter by touching the parameter(1 in Fig.1). Once the parameter is highlighted, the color changes from red to white. Adjust the parameter by turning the rotary knob clockwise(to increase) or counterclockwise(to decrease) until the desired value is reached.
- Leaving the knob still for seconds, the thermal profile graph display is readjusted to show the new parameters. Repeat the above steps to edit another parameter.
- To return to MENU page, tap "↑" key. Upon leaving PROG page, a reminder appears, “SAVE?”. Tap “Yes” to save the new program.

Specifications

- Temperature Range: 8~99 ºC
- Time Range: 1 sec to 60 min
- Ramping rate: up to 3ºC /sec
- Temperature precision：±0.2ºC
- Display precision：0.1 ºC
- Temperature uniformity：±0.5ºC
- Lid Temperature : 99ºC
- Ambient temperature: 8~30ºC
- Sample capacity: 16 x 0.2mL PCR tubes
- Memory: 15 programs
- Power Supply: 12V DC
- Display: LCD touch screen
- Dimensions: 20×20×4 cm
- Net Weight : ~2.5 kg

Heated Lid

The heated lid can be turned on/off by tapping it to white/gray. While entering the PROGRAM page (see Fig.2), the heated lid starts heating. When the heated lid is turned on, the program starts to run when the heated lid reaches 85ºC. When the program completes, it automatically goes to 8ºC and the heated lid is turned off. It is recommended to turn the heated lid off when the setting temperature is below ambient.